



#25123

BLACK & VEATCH Waste Science, Inc.

400 Northridge Road, Suite 350, Atlanta, Georgia 30350, (404) 594-2500, Fax: (404) 587-2930

US EPA -- Region IV
Site Inspections
Work Assignment No. 12

BVWS Project 52012.359
September 14, 1994

Mr. Narindar Kumar
Chief, Site Assessment Section
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

Subject: Final Site Inspection Prioritization
Johnson Landfill
Trinity, Morgan County, AL
EPA ID No. ALD980495873

Dear Mr. Kumar:

Enclosed please find one copy of the Final Site Inspection
Prioritization for Johnson Lanfill in Trinity, Morgan County, Alabama.
If you have any questions, please contact me at 404/643-2320.

Very truly yours,

BLACK & VEATCH Waste Science, Inc.

Victor Blix
Project Manager

fw
Enclosure

cc: Doug Thompson, EPA PO, w/o enclosures
Deborah Davidson, EPA CO, w/o enclosures
Earl Bozeman, EPA WAM, w/o enclosures

REC'D

SEP 15 1994

DYNAMAC
CORPORATION
Environmental Services

Peachtree Center Tower
230 Peachtree Street, N.W.
Suite 500
Atlanta, GA 30303

Telephone: 404-681-0933
Fax: 404-681-0894

NEPAP APPROVED
BA 9/28/94

REC'D
SEP 15 1994

August 26, 1994

Mr. Narindar Kumar, Chief
Site Assessment Section
U.S. Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30365

Subject: Site Inspection Prioritization
Johnson Landfill
Trinity, Morgan County, Alabama
EPA ID ALD980495873

Re: BVWS Contract N^o 68-W9-0055 - Task Order 6, Amendment 2
BVWS Project 52012.359
Document Control BVWS-SIP-RD-151

Dear Mr. Kumar:

Dynamac Corporation has been tasked by BLACK & VEATCH Waste Science, Inc., under U.S. Environmental Protection Agency (EPA) Contract N^o 68-W9-0055 to conduct a Site Inspection Prioritization for Johnson Landfill (the landfill) in Trinity, Lawrence County, Alabama. In accordance with the scope of work for this task order, a preliminary Hazard Ranking System (HRS) score was prepared to determine the need for future activities at the site.

The landfill is located north of State Highway 24, near the intersection of County Road 40 and State Highway 24 in Trinity, Alabama (Refs. 1; 2, p. 1). In April 1976, the State issued a permit for the operation of the 15-acre landfill, which is owned by Mr. Howard Johnson. The permit allowed for the disposal of nontoxic, nonputrescible, solid industrial wastes at the landfill (Ref. 2, p. 2). Following a citizen's complaint in May 1979, the State conducted groundwater sampling at the landfill and at an adjacent homeowner's well. Analytical results of the groundwater samples revealed detectable levels of chromium and cadmium in the homeowner's well and implicated the landfill as the source of the contamination (Ref. 2, p. 2). Followup groundwater sampling failed to confirm earlier results, and the landfill was allowed to continue operations, provided it remained in compliance with Alabama Department of Environmental Management (ADEM) waste disposal regulations (Ref. 2, p.2). On October 8, 1979, nine citizens living in the vicinity of the landfill filed a second complaint regarding waste handling and disposal practices at the landfill (Ref. 2, p. 3). On September 22, 1980, the State informed Mr. Johnson that he must submit a plan to address ongoing problems at the landfill (Ref. 2, p. 4). As of September 28, 1984, ADEM still listed the landfill as an active disposal facility. On October 18, 1984, the landfill was referred to the EPA for further investigation (Ref. 2, pp. 1-5).

During the week of April 28, 1985, NUS Corporation conducted a Site Screening Investigation (SSI) at the landfill (Ref. 2, p. 1). Eight samples were collected at the landfill, including four groundwater samples, two surface water and sediment samples, and two surface soil samples (Ref. 2, pp. 5, 6). The samples were analyzed for purgeable (volatile) organic compounds, extractable organic compounds, chlorinated compounds, metals, and cyanide (Ref. 2, p. 6). A quality control review of the analytical data indicates that for all water samples, the analytical data for purgeable organic compounds are invalid, with the exception of carbon disulfide, toluene and methylene chloride (Ref. 2, p. 6). Analyses of the soil samples indicated the presence of arsenic, beryllium, chromium, copper, nickel and zinc in onsite soils (Ref. 2, p. 9). Analyses of groundwater samples collected from onsite monitoring wells indicated elevated levels of arsenic, barium, cobalt, chromium, copper, nickel and manganese as compared to two offsite private wells (Ref. 2, pp. 10, 13). Chrysene and indeno(1,2,3-cd)pyrene were identified at elevated levels in onsite soil samples (Ref. 2, p. 11). Analyses of a surface water sample collected from an intermittent stream downgradient of the landfill indicated an elevated level of manganese; analyses of a sediment sample collected from the intermittent stream downgradient of the landfill indicated elevated levels of cobalt and nickel (Ref. 2, p. 10).

On April 25, 1994, the State received a citizen's complaint regarding the erosion of the landfill covering, which had exposed industrial wastes. Reportedly, eight cows died from consuming onsite hazardous waste. Following this complaint, the State conducted a sampling investigation at the landfill on April 27, 1994. Nine samples were collected at the landfill, including four groundwater samples, two surface water samples, one soil sample and two waste samples. No background soil or groundwater samples were collected. Analyses of these samples revealed detectable levels of several organic and inorganic constituents (Ref. 3, pp. 2). Analyses of two waste samples collected onsite revealed elevated levels of several organic and inorganic constituents, including arsenic, chromium, xylene and toluene. Analyses of two leachate samples collected during this sampling event revealed elevated levels of barium, cobalt, chromium, antimony, xylene and toluene (Ref. 3, pp. 2, 5-13).

A preliminary HRS score for the landfill was calculated using the Site Inspection Worksheets. Pathways evaluated include groundwater migration, surface water migration, soil exposure, and air migration. The score reflects a Hazardous Waste Quantity (HWQ) value of 100 for the groundwater migration, surface water migration, and air migration pathways, based on the total acreage (15 acres) of the landfill. For the soil exposure pathway, the landfill was evaluated on its total area (653,400 square feet), yielding an HWQ of 10. Contaminant characteristics values were highest for cadmium, chromium, and nickel.

The majority of residents within a 4-mile radius of the landfill obtain potable water from the Trinity Water Authority and the West Morgan/East Lawrence Water Company (Ref. 4). Both water companies purchase their water from the City of Decatur, which obtains its water from an intake on the Tennessee River (Ref. 4). Residences located outside

municipal water distribution lines were assumed to rely on private wells for drinking water. It is estimated that a total of 2,702 people within the 4-mile radius utilize private wells for their potable water (Refs. 1; 5). The groundwater migration pathway was evaluated on an observed release based on the analytical results of groundwater samples collected during the SSI. The groundwater pathway score was limited by low potential contamination target values within a 4-mile radius of the landfill.

Surface water runoff from the landfill flows overland 600 feet southwest into a perennial tributary of Mud Tavern Creek (Ref. 1). The perennial tributary of Mud Tavern Creek continues for 2.25 miles prior to converging with Mud Tavern Creek. Mud Tavern Creek flows southeast approximately 6 miles to its confluence with the West Flint Creek, which then continues east to complete the 15-mile surface water migration pathway (Ref. 1).

There are no surface water intakes, wetlands or other sensitive environments identified along the 15-mile surface water migration pathway (Ref. 1). The surface water migration pathway was scored based on potential to release; no surface water or sediment samples were collected from a perennial water body during the SSI (Ref. 2, p. 13). The surface water migration pathway score was limited by low potential contamination target values.

Land use within a 4-mile radius of the landfill is a mixture of residential and commercial (Ref. 1). Approximately 268 people are located within 1 mile of the landfill (Refs. 1; 5). The soil exposure pathway was scored based on the analytical results of soil samples collected during the SSI (Ref. 2, p. 15). The soil exposure pathway was limited by low target values. The air migration pathway was scored based on potential to release; no air samples have been collected. A total of 11,063 people reside within 4 miles of the landfill (Refs. 1; 5; 7). No wetlands were identified within a 4-mile radius of the landfill (Ref. 1). The ranges of several federally designated endangered and/or threatened species include Morgan County, Lawrence County and the entire state of Alabama; however, specific locations of these species have not been identified (Refs. 1; 6).

HRS SCORING SUMMARY

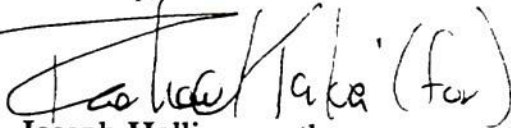
$$\begin{aligned} S_{gw} &= 14.51 \\ S_{soil} &= 10.94 \\ S_{soil} &= 6.75 \\ S_{air} &= 1.05 \\ \text{OVERALL SCORE} &= 8.86 \end{aligned}$$

Based on the available file material and overall score, no further action is recommended for the Johnson Landfill site.

Mr. Narindar Kumar
August 26, 1994
Page 4

Attached are all references used during this evaluation. If you have any questions or comments, please contact Victor Blix at (404) 643-2320.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joe Hollingsworth".

Joseph Hollingsworth
Site Manager

A handwritten signature in cursive script, appearing to read "Mary Jane Rigatti".

Mary Jane Rigatti
Manager, Atlanta Office

Enclosure

cc: Lori C. Conway, Dynamac Site Assessment Program Manager
Victor Blix, BVWS SIP Project Manager
File